REMARKS

The present application was filed on October 5, 2005 with claims 1 through 24. Claims 1 through 24 are presently pending in the above-identified patent application. Applicants propose to amend claims 8 and 9 and cancel claims 15-17, without prejudice, herein.

5   In the Office Action, the Examiner required restriction to one of the indicated inventions under 35 U.S.C. 121, objected to the application for omitting the abstract required by 37 CFR 1.72(b), objected to claim 2 because of indicated informalities, and rejected claim 8 under 35 U.S.C. §112. The Examiner has also rejected claims 1, 4, 7, 9, 13, 14, 18, 21, 23 and 24 under 35 U.S.C. §102(b) as being anticipated by Muller et al. (United States Patent No. 6,021,132), rejected claims 2 and 19 under 35 U.S.C. §103(a) as being unpatentable over Muller et al. in view of Benson et al. (United States Patent No. 6,151,321), rejected claims 3 and 20 under 35 U.S.C. §103(a) as being unpatentable over Muller et al. in view of Kamaraj et al. (United States Patent No. 6,501,757), rejected claim 5 under 35 U.S.C. §103(a) as being unpatentable over Muller et al. in view of Beshai (United States Publication No. 2004/0184448), rejected claims 6 and 22 under 35 U.S.C. §103(a) as being unpatentable over Muller et al. in view of Lavelle et al. (United States Patent No. 6,812,929), rejected claim 8 under 35 U.S.C. §103(a) as being unpatentable over Muller et al. in view of Sindhu et al. (United States Patent No. 6,493,347), rejected claim 10 under 35 U.S.C. §103(a) as being unpatentable over Muller et al. in view of Nation et al. (United States Patent No. 7,301,906), rejected claim 11 under 35 U.S.C. §103(a) as being unpatentable over Muller et al. in view of Davis (United States Publication No. 2007/0208876), and rejected claim 12 under 35 U.S.C. §103(a) as being unpatentable over Muller et al. in view of Miller et al. (United States Patent No. 6,247,058).

Restriction Requirement

The Examiner required restriction to one of the indicated inventions under 35 U.S.C. 121: Group I (claims 1-14 and 18-24) directed to queuing management; and Group II: (claims 15-17) directed to fault recovery.

Applicant affirms the election of Group I and cancels claims 15-17, without prejudice, herein.

Formal Objections

The application was objected to for omitting the abstract required by 37 CFR 1.72(b), claim 2 was objected to because of indicated informalities, and claim 8 was rejected

under 35 U.S.C. §112. Regarding claim 2, the Examiner asserts that the limitation "wherein said packet comprises a plurality of data units…if one of said data units…said data unit" should be replaced by – wherein said packet comprises a plurality of portions…if one of said portions…and said portions…is not a last portion of said packet--. Regarding claim 8, the Examiner asserts that there is insufficient antecedent basis for the limitation "wherein said sequential data units."

Applicant notes that the application has been amended to add an abstract. Support for this amendment can be found in the Summary of the Invention section of the originally filed disclosure.

Applicant notes that claim 2 has been amended in accordance with the Examiner's suggestion.

Applicant notes that claim 8 has been amended to correct the antecedent basis of the cited limitation.

Independent Claims 1 and 18

Independent claims 1 and 18 were rejected under 35 U.S.C. §102(b) as being anticipated by Muller et al. Regarding claim 1, the Examiner asserts that Muller discloses storing at least a portion of a packet in contiguous banks of a first buffer (col. 8, lines 43-44; col. 7, line 7; and col. 8, lines 52-54). The Examiner further asserts that "the buffers (buffer #1, #2, #3) may be further subdivided into the number of memory lines 'bank'.

It is unclear if the Examiner is equating a "bank" with a single memory line or a number of memory lines. In the former case, it is noted that a "bank" is well known in the art to comprise more than one memory line, and that this interpretation would therefore be inappropriate. In the latter case, it is noted that, in the text cited by the Examiner, Muller teaches:

> Referring now to FIG. 3A, a logical view of shared memory 230 is depicted having stored therein packet data in a number of buffers. In this example, the shared memory 230 is segmented into a number of buffers (pages) of programmable size. All the buffers may have the same size, or alternatively, individual buffer sizes may vary. In another embodiment, *the buffers may be further subdivided into a number of memory lines*. Each line may be used for storing packet data. In other embodiments, control information may also be associated with each of the memory lines. The control information may include information for facilitating efficient access of the packet data such as an end of

packet field. The separation of control information and data increases the efficiency of accesses to and from the shared memory 230.
(Col. 8, lines 37-54; emphasis added.)

Contrary to the Examiner's assertion, Muller does *not* disclose or suggest *multiple*

5   *banks*, and therefore cannot disclose or suggest *contiguous banks*; Muller also does *not* disclose

or suggest *storing at least a portion of a packet in contiguous banks of a first buffer*. (Applicants

note that the limitation "contiguous banks" is an affirmative limitation in the claims.)

Independent claims 1 and 18 require storing at least a portion of a packet in contiguous banks of

a first buffer.

10   Thus, Muller et al. do not disclose or suggest storing at least a portion of a packet

in contiguous banks of a first buffer, as required by independent claims 1 and 18.

Independent Claim 9

Independent claim 9 was rejected under 35 U.S.C. §102(b) as being anticipated by

Muller et al. In particular, the Examiner asserts that Muller discloses maintaining a buffer usage

15   count for at least one of said buffers (Abstract; col. 7, lines 25-27; and col. 9, lines 35-37).

Applicants note that independent claim 9 has been amended to require *wherein*

said buffer usage count provides an indication of a sum over all packets in said at least one of

said buffers of a number of output ports toward which each of said packets is destined, wherein

said at least one of said buffers contains two or more packets. The Examiner considered a

20   similar limitation in rejecting claim 14, wherein the Examiner cited col. 12, lines 27-31, of

Muller. In the text cited by the Examiner, Muller teaches:

The buffer tracking unit 329 processes the input port's 0010b
notification which indicates there are 3 buffer owners.
Read: 1110b
25   Modify: 1110b + 0011b + 0001b = 0010b
Write: 0010b
The other two output ports 206 complete transmission of 0010b the
buffer and so notify the buffer tracking unit 329.
(Col. 12, lines 27-31.)

30   Muller does *not* disclose or suggest, however, that the buffer usage count provides

an indication of a *sum over all packets in the buffer of a number of output ports toward which*

each of the packets is destined, wherein at least one buffer contains *two or more* packets.

Thus, Muller does not disclose or suggest wherein said buffer usage count

provides an indication of a sum over all packets in said at least one of said buffers of a number of

output ports toward which each of said packets is destined, wherein said at least one of said buffers contains two or more packets, as required by independent claim 9, as amended.

<u>Dependent Claims 2-8, 10-14 and 19-24</u>

Claims 2-8, 10-14, and 19-24 are dependent on independent claims 1, 9, and 18, respectively, and are therefore patentably distinguished over Muller et al., Benson et al., Kamaraj et al., Beshai, Lavelle et al., Sindhu et al., Nation et al., Davis, and Miller et al., alone or in combination, because of their dependency from amended independent claims 1, 9, and 18 for the reasons set forth above, as well as other elements these claims add in combination to their base claim.

<u>Conclusion</u>

All of the pending claims following entry of the amendments, i.e., claims 1-14 and 18-24, are in condition for allowance and such favorable action is earnestly solicited.

If any outstanding issues remain, or if the Examiner has any further suggestions for expediting allowance of this application, the Examiner is invited to contact the undersigned at the telephone number indicated below.

The Examiner's attention to this matter is appreciated.

Respectfully submitted,

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